

Green Deconstruction Options for Correctional Facilities

Virginia Department of Corrections

Environmental Services Unit

Presenters:

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VADOC/ESU

- Environmental Services Unit established 2001.
 - Water/wastewater (2001)
 - Pollution Prevention (2004)
 - Remediation Section
 - Regional Environmental Specialists
 - Pesticide Program
 - Air Compliance
 - Boiler Plant Operation
 - Recycling (2009)



Site History - Mecklenburg Correctional Center

- Originally constructed in march, 1977
- 189 acres including facility, surrounding fields, and forest
- 304 employees
- ≈686 offenders



Site History - Mecklenburg Correctional Center

- Death Row Prison Escape (1984)
- Nations Largest

“...The only reason you walk out of here every day is because the inmates let you walk out...”

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(one of the officers held hostage)



Site History - Mecklenburg Correctional Center

- All escapees were eventually captured
 - Death row moved to Sussex I State Prison May 1998
- Very cost inefficient prison
- The facility was eventually closed May 24, 2012



Green Deconstruction

- **Goals**
 - **Re-entry**
 - Certifications
 - Training
 - Highest possible pay
 - **Reuse**
 - **Resale**
 - **Recycle**
 - **Hazardous material abatement**
 - Asbestos
 - Lead paint
 - Mercury
 - Radioactive smoke detectors
 - **Remediation**
 - Above ground storage tank closings



Purpose of In-House Deconstruction

- Reduce amount of landfill waste
- Reduce costs associated with outside contractors
- Maximize the amount being recycled
- Create of source of income for the Commonwealth
- Remediate potential pollution sources
 - ASTs
 - Lead
 - Asbestos
 - Mercury
- Support re-entry of offenders
 - Giving real world experience and certifications



Re-Entry

- All offenders
 - OSHA 30 for Construction (Job Requirement – Taught On-Site)
 - Operation of Heavy Equipment
 - American Heart Association Heartsaver First Aid, CPR, AED (Every 2 Years)
 - Bloodborne Pathogens (Annually)
- Real world experience and certifications available

Recycling

- Scrap metal
 - Copper
 - Steel
 - Stainless
 - Aluminum
 - Iron
 - Wiring
- Building materials
 - Bricks
 - Concrete
 - Being sold to the community
 - Another source of income
- Non-metal
 - Wire coatings
 - Communication Cables



Reuse

- Office furniture
- Boilers
- Air conditioners
- Stainless steel fixtures
- Light bulbs
 - Universal waste reduction
- Land reversion
 - Keeping existing infrastructure
 - Water tower
 - Water pumps
- Building donations to County
 - Warehouse
 - Motor pool
 - Maintenance Shop
- Barracks and Firing Range will stay DOC



Environmental Remediation

- Working relationship with DEQ/EPA/DCR/VOSH
 - DEQ Office of Pollution Prevention
 - EPA WARM Program
- Hazardous material abatement
 - Asbestos abatement
 - Lead abatement
 - Radioactive smoke detectors
 - Mercury switches
- Above ground storage tank closing

Safety Programs



- VOSH – Working relationship
 - Voluntary Consultation
- Hazard Risk Assessment
 - On all possible job assignments (currently 18 job assignments)
- Full compliment of programs
 - Fall Protection Plan
 - Hearing Conservation Plan
 - Exposure Control Plan
 - Respiratory Protection
 - Hazardous Communications (GHS Compliant)
 - Permit-Required Confined Spaces
 - Lockout/Tagout
 - Hotwork

Safety/Environmental

- Daily Safety Meetings – Offender led, topics provided
- On-Site Safety Professional
- Pre-operations checklists
 - On all heavy equipment, rock crusher, aerial lifts and fall protections systems (approx. 12+ different checklists)
- Required PPE (Staff, Offenders, and Visitors)
 - Hardhats
 - Safety Glasses
 - Safety toe footwear (steel toe)
 - Hi-Viz apparel



Green Deconstruction Process

- **File the correct permits**
 - Demolition permit
 - Erosion and sediment control plans
 - Proper AST tank closures
 - Written safety plans
 - Demolition plan
- **Air Emission Reduction**
 - Ultra low sulfur diesel fuel
 - Interim Tier 4 equipment

Green Deconstruction Process

- Hazardous material abatement
 - Lead inspection
 - Asbestos inspection
 - Radiation removal
 - Refrigerant recovery



Green Deconstruction Process

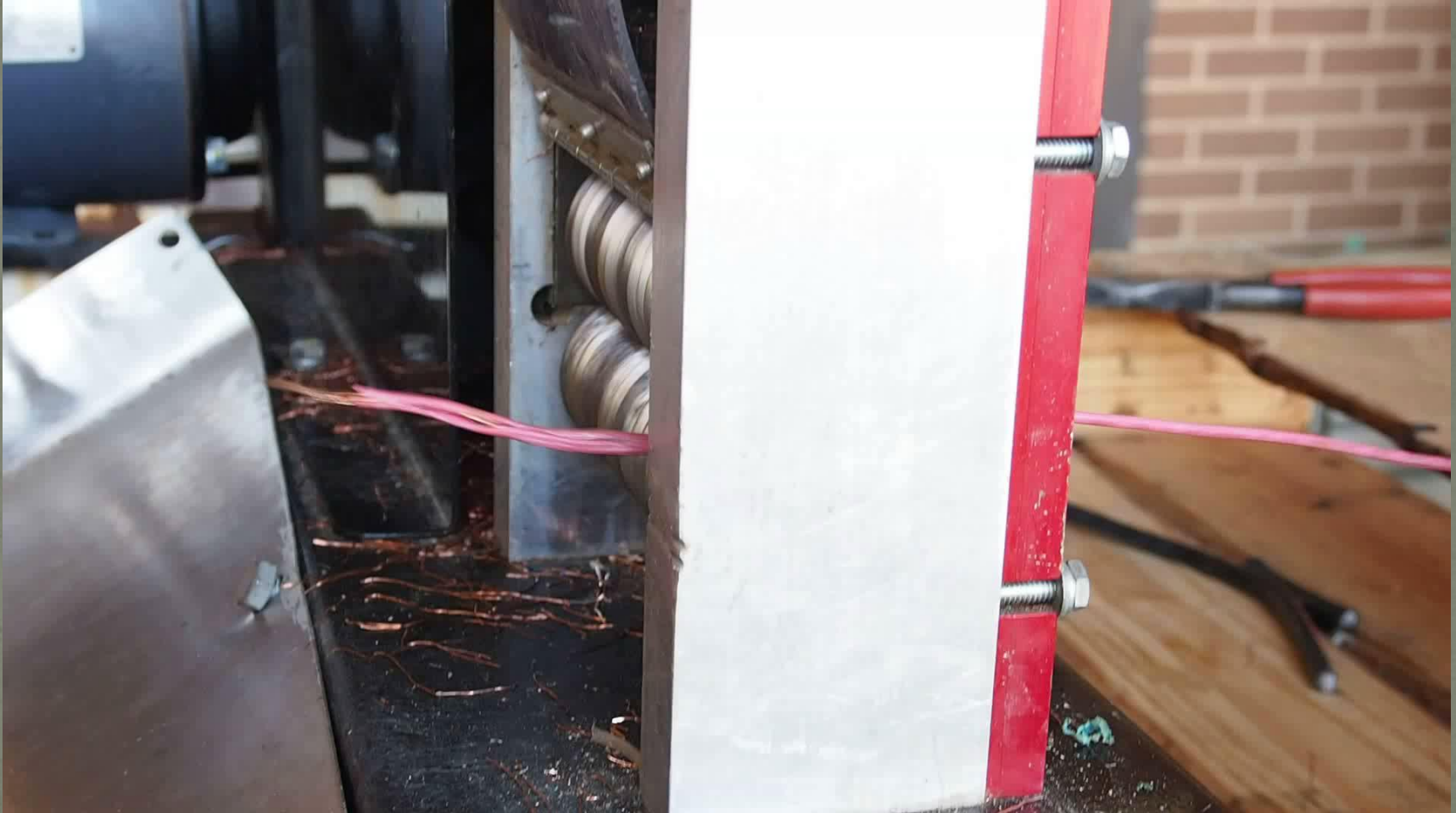
- Equipment Off-Set
 - Usable goods transferred to other DOC Facilities
 - Light bulbs
 - Air conditioners
 - Fixtures
 - Metal Recycling (2 local firms)
 - Crushed Stone (available for purchase by public)
 - Government Deals
 - Boilers, etc



Green Deconstruction Process

- Soft Demo
 - Wiring removal
 - Recycling of collected materials
 - Copper
 - Fiber optic
 - Communication wiring

Recycling



Comes Out
@ \$3.07/lbs

Goes In
@ \$0.81/lbs

Green Deconstruction Process

- Soft Demo
 - Copper pipe
 - Cell doors
 - Stainless steel fixtures
 - Light fixtures
 - Light bulbs
 - Ceiling tile
 - Pipe insulation
 - Ventilation equipment



Green Deconstruction Process

- Building material crushing
 - Rock crusher
 - Sold to local governments and public
 - stockpiled



Questions?

